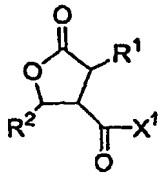
We claim:

1. Compounds of formula I:



I

wherein

R^1 = H, or C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $=CHR^3$, $-C(O)OR^3$, $-C(O)R^3$, $-CH_2C(O)OR^3$, $-CH_2C(O)NHR^3$, where R^3 is H or C_1-C_{10} alkyl, cycloalkyl, or alkenyl;

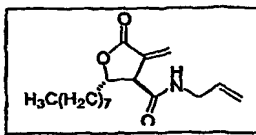
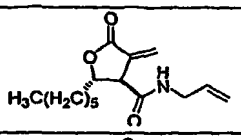
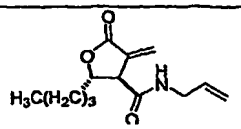
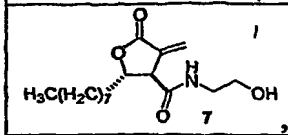
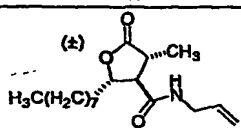
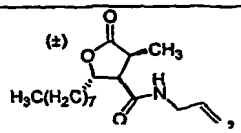
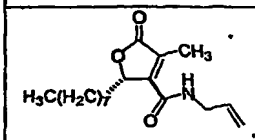
R^2 = C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

X^1 = NHR^4, where R^4 is H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, the R^4 group optionally containing a carbonyl group, a carboxyl group, a carboxyamide group, an alcohol group, or an ether group, the R^4 group further optionally containing one or more halogen atoms.

2. The compounds of claim 1, wherein R^1 is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, or $=CH_2$.

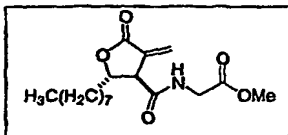
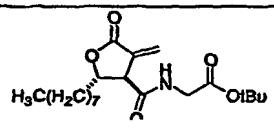
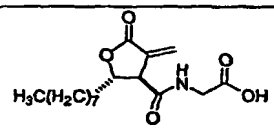
3. The compounds of claim 2, wherein R^1 is $-CH_3$ or $=CH_2$.

4. The compounds of claim 3, wherein the compound is selected from the group consisting of:

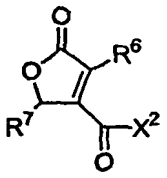
		
		 , and
		

5. The compounds of claim 1, wherein R^4 is $-CH_2C(O)OR^5$ or $-CH_2C(O)NHR^5$, where R^5 is H, C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

6. The compounds of claim 5, wherein the compound is selected from the group consisting of:

	 , and	

7. Compounds of formula II:



II

wherein

R^6 = H, or C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $-C(O)OR^8$, $-C(O)R^8$, $-CH_2C(O)OR^8$, $-CH_2C(O)NHR^8$, where R^8 is H or C_1-C_{10} alkyl, cycloalkyl, or alkenyl;

R^7 = C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

$X^2 = NHR^9$, where R^9 is H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, the R^9 group optionally containing a carbonyl group, a carboxyl group, a carboxyamide group, an alcohol group, or an ether group, the R^9 group further optionally containing one or more halogen atoms;

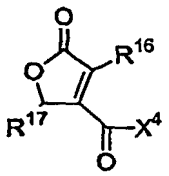
with the proviso that when R^6 is $-CH_3$, and R^7 is n-$C_{13}H_{27}$, X^2 is not $-NHC_2H_5$.

8. The compounds of claim 7, wherein R^6 is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

9. The compounds of claim 8, wherein R^6 is $-CH_3$.

10. The compounds of claim 7, wherein R^9 is $-CH_2C(O)OR^{10}$ or $-CH_2C(O)NHR^{10}$, where R^{10} is H, C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

11. Compounds of formula IV:



IV

wherein

R^{16} = H, or C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $-C(O)OR^{18}$, $-C(O)R^{18}$, $-CH_2C(O)OR^{18}$, $-CH_2C(O)NHR^{18}$, where R^{18} is H or C_1-C_{10} alkyl, cycloalkyl, or alkenyl;

R^{17} = C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

$X^4 = OR^{19}$, where R^{19} is C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, the R^{19} group optionally containing a carbonyl group, a carboxyl group, a carboxyamide group, an alcohol group, or an ether group, the R^{19} group further optionally containing one or more halogen atoms;

with the proviso that when R^{16} is $-CH_3$ and R^{19} is $-CH_3$, then R^{17} is not substituted or unsubstituted phenyl, $-nC_3H_7$, $-nC_5H_{11}$, $-nC_{13}H_{27}$,

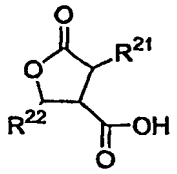
and with the further proviso that when R^{16} is H and R^{19} is $-CH_3$, then R^{17} is not substituted or unsubstuted phenyl or $-CH_3$, and when R^{16} is H and R^{19} is $-CH_2CH_3$, then R^{17} is not $-iC_3H_7$, or substituted or unsubstituted phenyl.

12. The compounds of claim 11, wherein R^{16} is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

13. The compounds of claim 12, wherein R^{16} is $-CH_3$.

14. The compounds of claim 11, wherein R^{19} is $-CH_2C(O)OR^{20}$ or $-CH_2C(O)NHR^{20}$, where R^{20} is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

15. Compounds of formula V:



V

wherein

R^{21} = C_2-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $=CHR^{23}$, $-C(O)OR^{23}$, $-C(O)R^{23}$, $-CH_2C(O)OR^{23}$, $-CH_2C(O)NHR^{23}$, where R^{23} is H or C_1-C_{10} alkyl, cycloalkyl, or alkenyl, except when R^{21} is $=CHR^{23}$, R^{23} is not H;

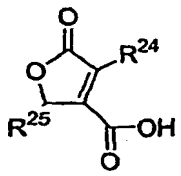
R^{22} = C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

with the proviso that when R^{21} is $-COOH$, then R^{22} is not $-CH_3$, $-nC_5H_{11}$, or $C_{13}H_{27}$, and with the further proviso that when R^{21} is $-CH_2COOH$, then R^{22} is not $-CH_3$, $-CH_2CH_3$, or $-iC_5H_{11}$.

16. The compounds of claim 15, wherein R^{21} is C_2-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

17. The compounds of claim 16, wherein R^{21} is $=CH_2$.

18. Compounds of formula VI:



VI

wherein:

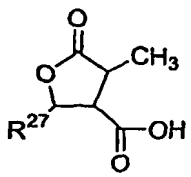
R^{24} = C_2-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $-C(O)OR^{26}$, $-C(O)R^{26}$, $-CH_2C(O)OR^{26}$, $-CH_2C(O)NHR^{26}$, where R^{26} is H or C_1-C_{10} alkyl, cycloalkyl, or alkenyl;

R^{25} = C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

with the proviso that when R^{24} is –COOH, then R^{25} is not $-CH_3$, $-nC_5H_{11}$, or $C_{13}H_{27}$, and with the further proviso that when R^{24} is $-CH_2COOH$, then R^{25} is not $-CH_3$, $-CH_2CH_3$, or $-iC_5H_{11}$.

19. The compounds of claim 18, wherein R^{21} is C_2-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

20. Compounds of formula VII:

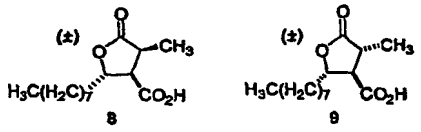


VII

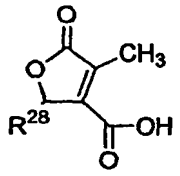
wherein R^{27} = C_3-C_4 alkyl, C_6-C_{10} alkyl, C_{12} alkyl, C_{14} alkyl, C_{16}-C_{20} alkyl.

21. The compounds of claim 20, selected from the group consisting of:

and



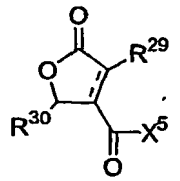
22. A compound of formula VIII:



VIII

wherein R^{28} is C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, with the proviso that R^{28} is not $-CH_3$, $-nC_3H_7$, $-nC_{11}H_{23}$, or $-nC_{13}H_{27}$.

23. A pharmaceutical composition comprising a pharmaceutical diluent and a compound of formula IX:



IX

R^{29} = H, or C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $=CHR^{31}$, $-C(O)OR^{31}$, $-C(O)R^{31}$, $-CH_2C(O)OR^{31}$, $-CH_2C(O)NHR^{31}$, where R^{31} is H or C_1-C_{10} alkyl, cycloalkyl, or alkenyl;

R^{30} = C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

X^5 = -OR^{32}, or –NHR^{32}, where R^{32} is H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, the R^{32} group optionally containing a carbonyl group, a carboxyl group, a carboxyamide group, an alcohol group, or an ether group, the R^{32} group further optionally containing one or more halogen atoms;

with the proviso that when R^{29} is $=CH_2$, then X^5 is not OH.

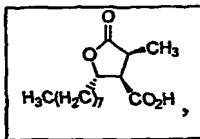
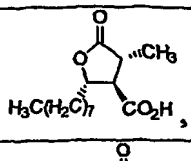
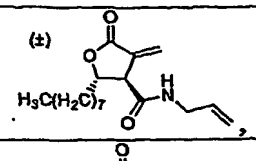
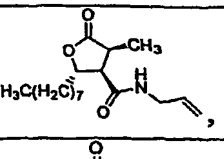
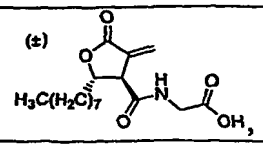
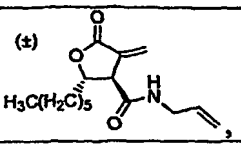
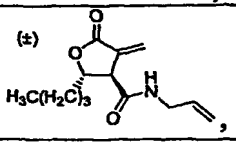
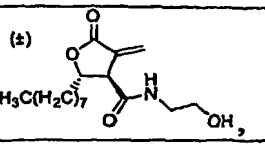
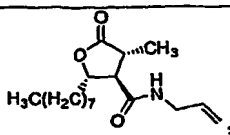
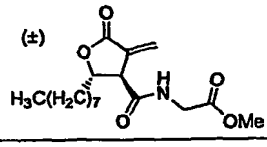
24. The pharmaceutical compositions of claim 23, wherein R^{29} is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, or $=CH_2$.

25. The pharmaceutical compositions of claim 24, wherein R^{29} is $–CH_3$ or $=CH_2$.

26. The pharmaceutical compositions of claim 23, wherein R^{32} is -$CH_2C(O)OR^{33}$ or -$CH_2C(O)NHR^{33}$, where R^{33} is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

27. The pharmaceutical compositions of claim 23, where R^{29} is $–C_6H_{13}$ or $–C_8H_{17}$.

28. The pharmaceutical compositions of claim 23, wherein the compound is selected from the group consisting of:

29. A pharmaceutical composition comprising a pharmaceutical diluent and a compound according to claim 1.

30. A pharmaceutical composition comprising a pharmaceutical diluent and a compound according to claim 7.

31. A pharmaceutical composition comprising a pharmaceutical diluent and a compound according to claim 11.

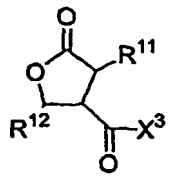
32. A pharmaceutical composition comprising a pharmaceutical diluent and a compound according to claim 15.

33. A pharmaceutical composition comprising a pharmaceutical diluent and a compound according to claim 18.

34. A pharmaceutical composition comprising a pharmaceutical diluent and a compound according to claim 20.

35. A pharmaceutical composition comprising a pharmaceutical diluent and a compound according to claim 22.

36. A pharmaceutical composition comprising a pharmaceutical diluent and a compound according to Formula III:.



III

wherein

R^{11} = H, or C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $=CHR^{13}$, $-C(O)OR^{13}$, $-C(O)R^{13}$, $-CH_2C(O)OR^{13}$, $-CH_2C(O)NHR^{13}$, where R^{13} is H or C_1-C_{10} alkyl, cycloalkyl, or alkenyl;

R^{12} = C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

$X^3 = OR^{14}$, where R^{14} is C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, the R^{14} group optionally containing a carbonyl group, a carboxyl group, a carboxyamide group, an alcohol group, or an ether group, the R^{14} group further optionally containing one or more halogen atoms.

37. The pharmaceutical formulation of claim 36, wherein R^{11} is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, or $=CH_2$.

38. The pharmaceutical formulation of claim 37, wherein R^{11} is $-CH_3$ or $=CH_2$.

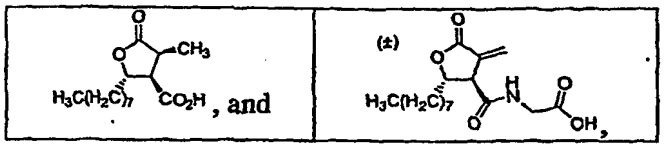
39. The pharmaceutical formulation of claim 36, wherein R^{14} is $-CH_2C(O)OR^{15}$ or $-CH_2C(O)NHR^{15}$, where R^{15} is C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

40. A method of inducing weight loss in an animal or human subject comprising administering an effective amount of a pharmaceutical composition according to claim 23 to said subject.

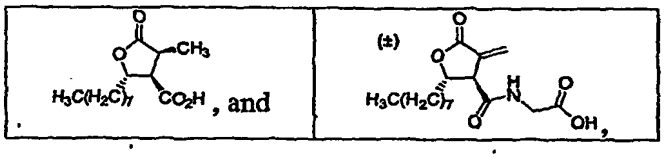
41. The method of claim 40, wherein the subject is a human.

42. The method of claim 40, wherein the subject is an animal.

43. The method of claim 41, wherein the pharmaceutical composition comprises a compound selected from the group consisting of:



44. The method of claim 42, wherein the pharmaceutical composition comprises a compound selected from the group consisting of:

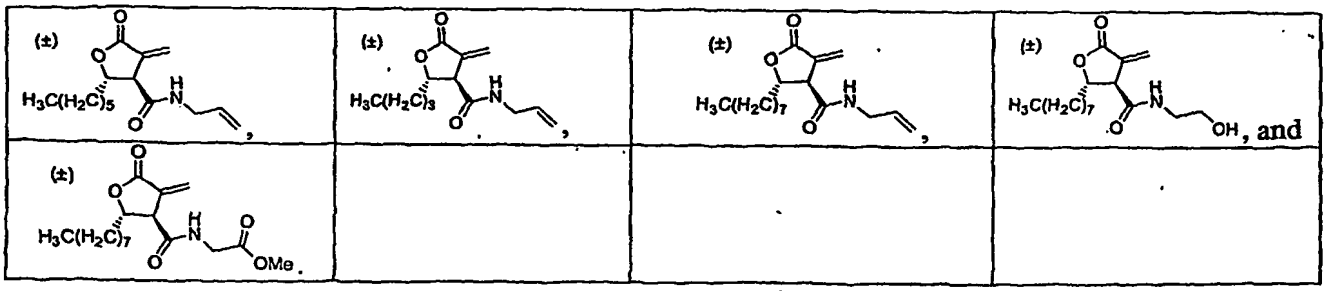


45. A method of inhibiting growth of cancer cells in an animal or human subject, comprising administering an effective amount of a pharmaceutical composition according to claim 23 to said subject.

46. The method of claim 45, wherein the subject is a human.--

47. The method of claim 45, wherein the subject is an animal.--

48. The method of claim 46, wherein the pharmaceutical composition comprises a compound selected from the group consisting of:



49. The method of claim 47, wherein the pharmaceutical composition comprises a compound selected from the group consisting of:

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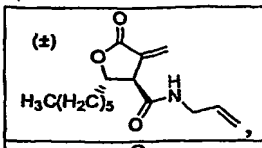
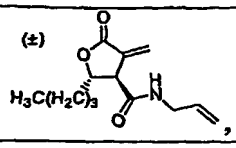
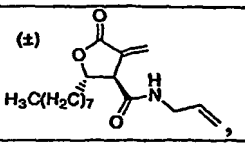
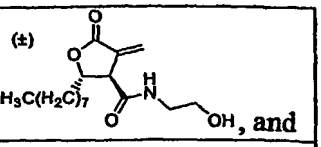
<td>  </td>
<td>  </td>
<td>  </td>
<td>  </td>
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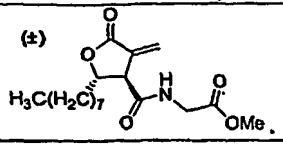
<td>  </td>
<td></td>
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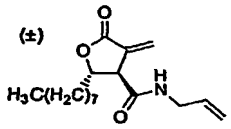
</tr>
</table>

50. A method of stimulating the activity of CPT-1 in an animal or human subject comprising administering an effective amount of a pharmaceutical composition according to claim 23 to said subject.

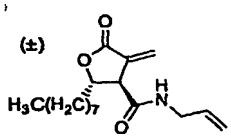
51. The method of claim 50, wherein the subject is a human.

52. The method of claim 50, wherein the subject is an animal.

53. The method of claim 51, wherein the compound is:



54. The method of claim 52, wherein the compound is:



55. A method of inhibiting the activity of neuropeptide-Y in an animal or human subject comprising administering an effective amount of a pharmaceutical composition according to claim 23 to said subject.

56. The method of claim 55, wherein the subject is a human.

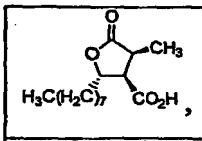
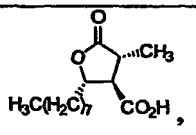
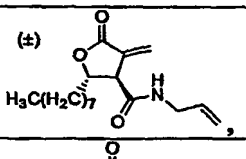
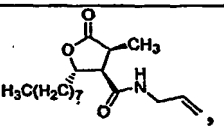
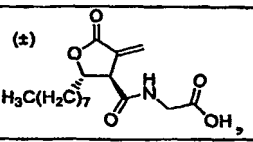
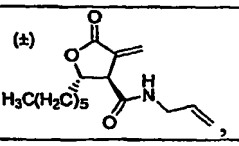
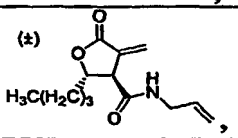
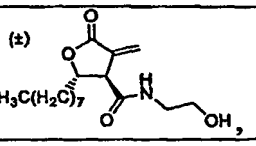
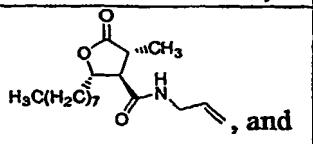
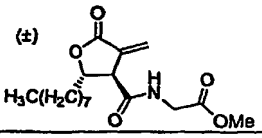
57. The method of claim 55, wherein the subject is an animal.

58. A method of inhibiting fatty acid synthase activity in an animal or human subject comprising administering an effective amount of a pharmaceutical composition according to claim 23 to said subject.

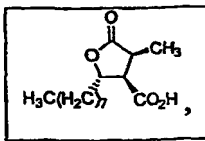
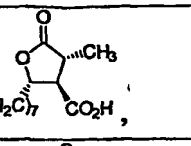
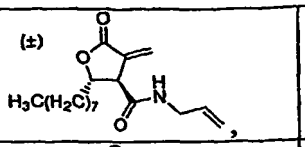
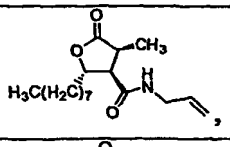
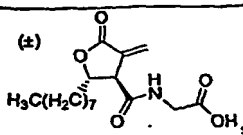
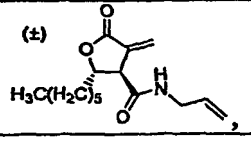
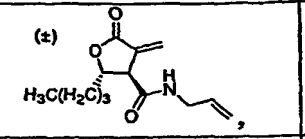
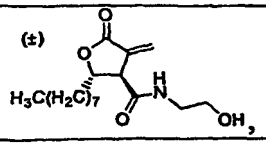
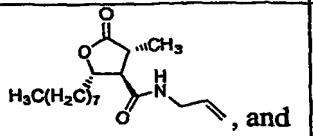
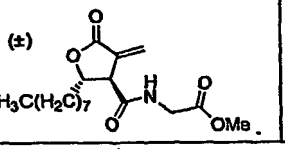
59. The method of claim 58, wherein the subject is a human.

60. The method of claim 58, wherein the subject is an animal.

61. The method of claim 59, wherein the compound is selected from the group consisting of:

62. The method of claim 60, wherein the compound is selected from the group consisting of:

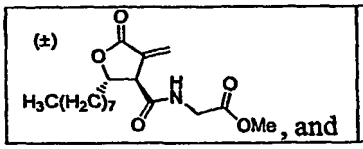
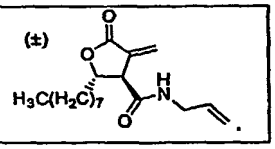
			
			
			

63. A method of inhibiting growth of invasive microbial cells in an animal or human subject comprising the administration of an effective amount of a pharmaceutical composition according to claim 23 to said subject.

64. The method of claim 63, wherein the subject is a human.

65. The method of claim 63, wherein the subject is an animal.

66. The method of claim 64, wherein the compound is selected from the group consisting of:

67. The method of claim 65, wherein the compound is selected from the group consisting of: